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the sensor people

Part no.: 50137173
LS3C/8X-M8
Throughbeam photoelectric sensor transmitter

CE · c(UL)us LISTED · IP 67 · IP 69K · ECOLAB

Figure can vary

Contents

- Technical data
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- Dimensioned drawings
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SMART **SENSOR** BUSINESS

Part no.: 50137173 – LS3C/8X-M8 – Throughbeam photoelectric sensor

Technical data

Basic data	
Series	3C
Operating principle	Throughbeam principle
Device type	Transmitter

Special design	
Special design	Activation input

Optical data	
Operating range	Guaranteed operating range
Operating range	0.05 ... 8.5 m
Operating range limit	Typical operating range
Operating range limit	0.05 ... 10 m
Beam profile	Divergent
Light source	LED, Red
LED light wavelength	632 nm
Transmitted-signal shape	Pulsed
LED protection class	Exempt group (in acc. with EN 62471)
Light-spot size [at sensor distance]	4 mm [100 mm]
Type of light-spot geometry	Round

Electrical data		
Protective circuit		Polarity reversal protection Short circuit protected
Performance data		
Supply voltage		10 ... 30 V, DC, Incl. residual ripple
Residual ripple		0 ... 15 %, From U_B
Open-circuit current		0 ... 20 mA
Inputs		
Number of activation inputs		1 Piece(s)
Activation inputs		
Voltage type		DC
Switching voltage		Low: ≤2V high: ≥8V
	Activation input 1	
	Active switching state	High

Timing	
Readiness delay	300 ms

Connection		
Connection 1		
Type of connection		Connector
Function		Voltage supply Signal IN
Thread size		M8
Type		Male
Material		Metal
No. of pins		4 -pin

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Mechanical data	
Design	Cubic
Dimension (W x H x L)	11.4 mm x 34.2 mm x 18.3 mm
Housing material	Plastic, PC-ABS
Lens cover material	Plastic / PMMA
Net weight	10 g
Housing color	Red
Type of fastening	Via optional mounting device Through-hole mounting
Compatibility of materials	ECOLAB

Operation and display	
Type of display	LED
Number of LEDs	2 Piece(s)

Environmental data	
Ambient temperature, operation	-40 ... 60 °C
Ambient temperature, storage	-40 ... 70 °C

Certifications	
Degree of protection	IP 69K IP 67
Protection class	III
Certifications	c UL US
Standards applied	IEC 60947-5-2

Classification	
eCl@ss 8.0	27270901
eCl@ss 9.0	27270901
ETIM 5.0	EC002716

Suitable receivers

	Part no.	Designation	Article	Description
	50137189	LE3C/4W-M8	Throughbeam photoelectric sensor receiver	Operating range limit: 0.05 ... 10 m Supply voltage: DC Digital switching outputs: 2 Piece(s) Digital switching output 1: Transistor, Push-pull, Light switching (PNP)/dark switching (NPN) Digital switching output 2: Transistor, Push-pull, Dark switching (PNP)/light switching (NPN) Switching frequency: 1,000 Hz Connection: Connector, M8, Metal, 4 -pin
	50137180	LE3C/6G-M8	Throughbeam photoelectric sensor receiver	Operating range limit: 0.05 ... 10 m Supply voltage: DC Digital switching outputs: 2 Piece(s) Digital switching output 1: Transistor, Push-pull, Light switching (PNP)/dark switching (NPN) Digital switching output 2: Transistor, Push-pull, Dark switching (PNP)/light switching (NPN) Switching frequency: 1,000 Hz Connection: Connector, M8, Metal, 4 -pin

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Part no.: 50137173 – LS3C/8X-M8 – Throughbeam photoelectric sensor

	Part no.	Designation	Article	Description
	50137192	LE3C/LP-M8	Throughbeam photoelectric sensor receiver	Operating range limit: 0.05 ... 10 m Supply voltage: DC Digital switching outputs: 2 Piece(s) Digital switching output 1: Transistor, Push-pull, Light switching (PNP)/dark switching (NPN) Digital switching output 2: Transistor, Push-pull, Dark switching (PNP)/light switching (NPN) Switching frequency: 1,000 Hz Connection: Connector, M8, Metal, 4 -pin

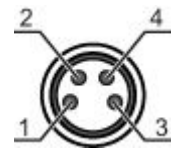## Dimensioned drawings

All dimensions in millimeters

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Part no.: 50137173 – LS3C/8X-M8 – Throughbeam photoelectric sensor
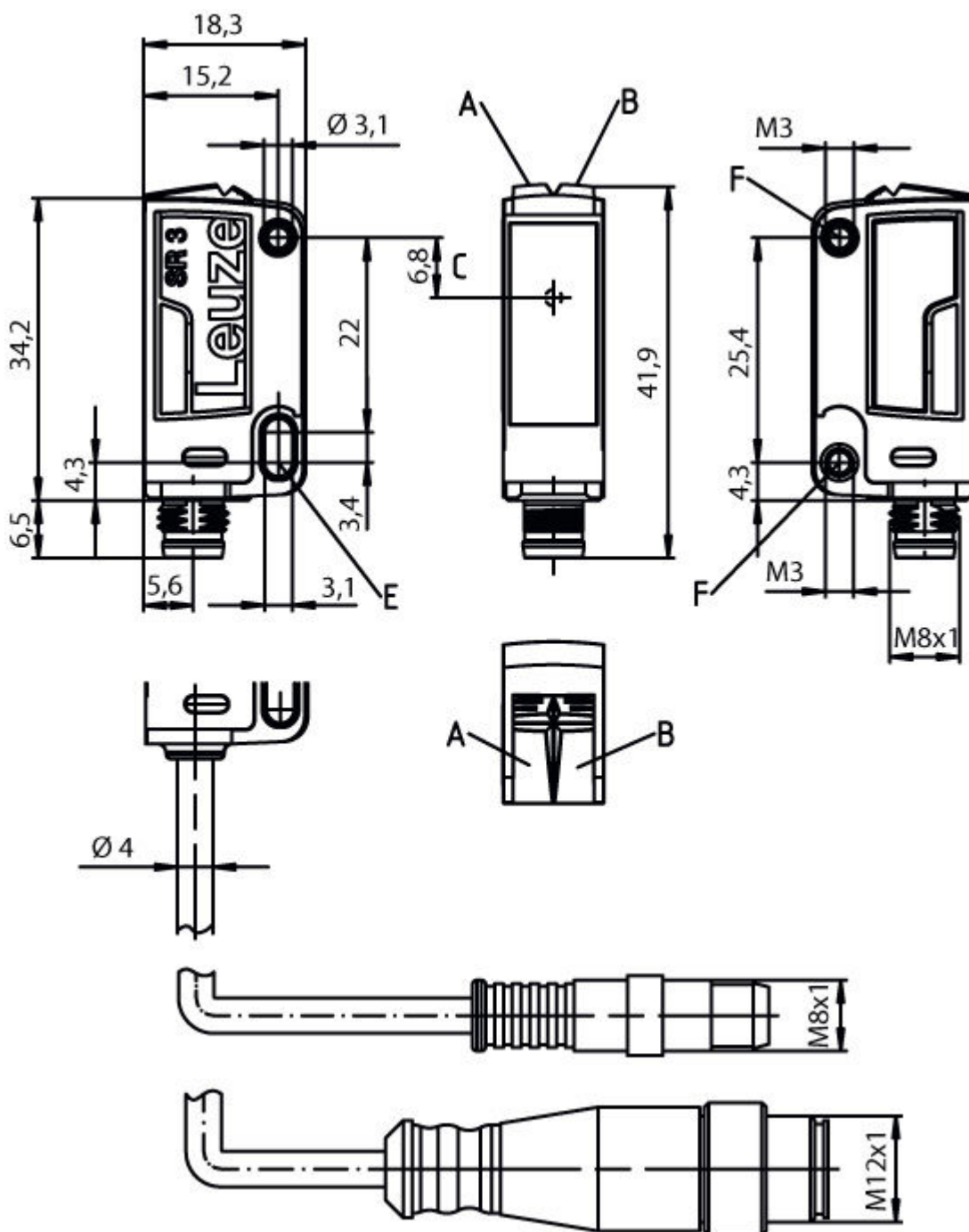
A   Green LED
B   Yellow LED
C   Optical axis
E   Mounting sleeve (standard)
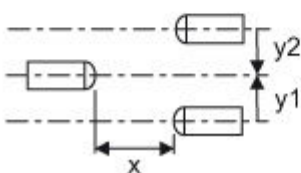F   Threaded sleeve (3C.B series)

Electrical connection

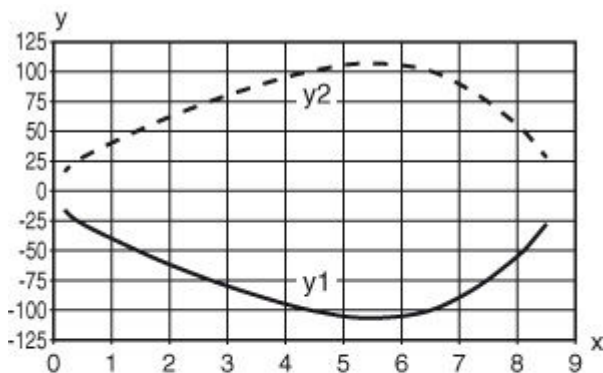| Connection 1	
Type of connection	Connector
Function	Voltage supply Signal IN
Thread size	M8
Type	Male
Material	Metal
No. of pins	4 -pin
Encoding	

Pin	Pin assignment
1	V+
2	n.c.
3	GND
4	IN 1

Diagrams

Typ. response behavior

x   Distance [m]
y   Misalignment [mm]

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Operation and display

LEDs

LED	Display	Meaning
1	Green, continuous light	Operational readiness
2	Yellow, continuous light	Transmitted beam active

Accessories

Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50130854	KD U-M8-4A-P1-020	Connection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PUR
	50130856	KD U-M8-4A-P1-050	Connection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PUR
	50130857	KD U-M8-4A-P1-100	Connection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 10,000 mm Sheathing material: PUR
	50130848	KD U-M8-4A-V1-020	Connection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PVC
	50130850	KD U-M8-4A-V1-050	Connection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC
	50130851	KD U-M8-4A-V1-100	Connection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 10,000 mm Sheathing material: PVC
	50130873	KD U-M8-4W-P1-020	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PUR

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	Part no.	Designation	Article	Description
	50130880	KD U-M8-4W-P1-020-DP	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connector, LED: Yes, 1 Piece(s) Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PUR
	50130875	KD U-M8-4W-P1-050	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PUR
	50130881	KD U-M8-4W-P1-050-DP	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connector, LED: Yes, 1 Piece(s) Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PUR
	50130876	KD U-M8-4W-P1-100	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 10,000 mm Sheathing material: PUR
	50130882	KD U-M8-4W-P1-100-DP	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connector, LED: Yes, 1 Piece(s) Connection 2: Open end Shielded: No Cable length: 10,000 mm Sheathing material: PUR
	50130869	KD U-M8-4W-V1-020	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PVC
	50130877	KD U-M8-4W-V1-020-DP	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connector, LED: Yes, 1 Piece(s) Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PVC
	50130871	KD U-M8-4W-V1-050	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC
	50130878	KD U-M8-4W-V1-050-DP	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connector, LED: Yes, 1 Piece(s) Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC
	50130872	KD U-M8-4W-V1-100	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 10,000 mm Sheathing material: PVC

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	Part no.	Designation	Article	Description
	50130879	KD U-M8-4W-V1-100-DP	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connector, LED: Yes, 1 Piece(s) Connection 2: Open end Shielded: No Cable length: 10,000 mm Sheathing material: PVC

Connection technology - Interconnection cables

		Part no.	Designation	Article	Description
		50130913	KDS U-M8-4A-M8-4A-P1-003	Interconnection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Connector, M8, Axial, Male, 4 -pin Shielded: No Cable length: 300 mm Sheathing material: PUR
		50130914	KDS U-M8-4A-M8-4A-P1-006	Interconnection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Connector, M8, Axial, Male, 4 -pin Shielded: No Cable length: 600 mm Sheathing material: PUR
		50130915	KDS U-M8-4A-M8-4A-P1-010	Interconnection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Connector, M8, Axial, Male, 4 -pin Shielded: No Cable length: 1,000 mm Sheathing material: PUR
		50130916	KDS U-M8-4A-M8-4A-P1-020	Interconnection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Connector, M8, Axial, Male, 4 -pin Shielded: No Cable length: 2,000 mm Sheathing material: PUR

Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
	50118542	BT 200M.5	Mounting bracket	Design of mounting device: Angle, L-shape Mounting bracket, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Adjustable Material: Stainless steel
	50124651	BT 205M	Mounting device set	Contains: 10x Design of mounting device: Angle, L-shape Mounting bracket, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Rigid Material: Metal
	50060511	BT 3	Mounting device	Design of mounting device: Angle, L-shape Mounting bracket, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Rigid Material: Metal

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	Part no.	Designation	Article	Description
	50105585	BT 3.1	Mounting strap set	Contains: 10x Design of mounting device: Retaining clip Mounting bracket, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Rigid Material: Metal
	50105546	BT 3B	Mounting device	Design of mounting device: Angle, L-shape Mounting bracket, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Rigid Material: Metal

Mounting technology - Rod mounts

	Part no.	Designation	Article	Description
	50117830	BTP 200M-D10	Mounting system	Design of mounting device: Protection hood Mounting bracket, at system: For 10 mm rod Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal
	50117829	BTP 200M-D12	Mounting system	Design of mounting device: Protection hood Mounting bracket, at system: For 12 mm rod Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal
	50117828	BTP 200M-D14	Mounting system	Design of mounting device: Protection hood Mounting bracket, at system: For 14 mm rod Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal
	50117256	BTU 200M-D10	Mounting system	Contains: 2x M3 x 18 screw, 2x position washers Design of mounting device: Mounting system Mounting bracket, at system: For 10 mm rod, Sheet-metal mounting Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal
	50117255	BTU 200M-D12	Mounting system	Contains: 2x M3 x 18 screw, 2x position washers Design of mounting device: Mounting system Mounting bracket, at system: For 12 mm rod, Sheet-metal mounting Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal
	50117254	BTU 200M-D14	Mounting system	Contains: 2x M3 x 18 screw, 2x position washers Design of mounting device: Mounting system Mounting bracket, at system: For 14 mm rod, Sheet-metal mounting Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal
	50120426	BTU 200M.5-D12	Mounting system	Contains: 2x M3 x 18 screw, 2x M3 mounting nut, 2x position washers Design of mounting device: Mounting system Mounting bracket, at system: For 12 mm rod Mounting bracket, at device: Screw type Type of mounting device: Turning, 360°, Clampable, Adjustable Material: Stainless steel

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Notes

Observe intended use!
• This product is not a safety sensor and is not intended as personnel protection.
• The product may only be put into operation by competent persons.
• Only use the product in accordance with its intended use.

For UL applications:
• For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).
• These proximity switches shall be used with UL Listed Cable assemblies rated 30V, 0.5A min, in the field installation, or equivalent (categories: CYJV/CYJV7 or PVVA/PVVA7)

- Light source: Average life expectancy 100,000 h at an ambient temperature of 25 °C

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